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Fluor Hanford, Inc. at Central Plateau

Report from the DOE Voluntary Protection Program Onsite Review

October 25-28, 2004

U.S. Department of Energy
Office of Environment, Safety and Health

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"...Some of us will serve in government for a season; others will spend an entire career here. But <u>all</u> of us should dedicate ourselves to great goals: We are not here to mark time, but to make progress, to achieve results, and to leave <u>a record of excellence</u>."

— **George W. Bush**
President of the United States
October 15, 2001
Constitution Hall, Washington, DC

Contents

Abbreviations and Acronyms

AJHA	Automated Job Hazard Analysis
BLS	Bureau of Labor Statistics
CDI	Canyon Disposition Initiative
CP	Central Plateau Remediation Project
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DOE-VPP	Department of Energy Voluntary Protection Program
EH	Office of Environment, Safety and Health
ES&H	Environment, safety and health
EZAC	Employee Zero-Accident Council
FHI	Fluor Hanford, Inc.
HAMMER	Hazardous Materials Management and Emergency Response
HAMTC	Hanford Atomic Metal Trades Council
ISMS	Integrated Safety Management System
JHA	Job Hazard Analysis
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
S&H	Safety and Health
S&M	Surveillance and Maintenance
SIC	Standard Industrial Classification
VPP	Voluntary Protection Program

Executive Summary

The Department of Energy (DOE) Voluntary Protection Program (VPP) (DOE-VPP) Team conducted an onsite review from October 25-28, 2004, at the Central Plateau Remediation Project (CP) managed by Fluor Hanford, Inc. (FHI). The Team found that CP must correct several deficiencies to maintain Star-quality performance. The following summarizes the Team's other observations and analysis.

Management Leadership

The Team found a high level of management commitment to safety and health (S&H). Managers demonstrated personal commitment to VPP. The leadership is capable, competent, and well-directed. The Team found evidence of leadership executed at the top and in the field. The Project Director and other managers visibly participate in safety programs and have successfully established an organization to implement an Integrated Safety Management System (ISMS) and VPP. CP management believes that all accidents are preventable and encourage a safety culture based on an injury-free workplace. VPP also measures the success of the ISMS, since VPP and ISMS complement each other.

Employee Involvement

Employees are enthusiastic about work, their company, and their coworkers. They are mature, well-seasoned, well-qualified, and competent. They are aware of job hazards and how these hazards are mitigated. The Team found that FHI workers are cooperative and ready to follow S&H procedures and processes. All employees understand their stop-work authority if unsafe conditions exist. They have no fear of reprisal and are ready to raise safety issues through a variety of communication means. CP continues to satisfy the VPP requirements for Employee Involvement.

Worksite Analysis

The Team found that the CP satisfies the requirements of DOE-VPP criteria. The worksite analysis processes are structured and implemented to control hazards to workers, the environment, and the public. Hazard analysis processes incorporated a variety of tools. A comprehensive baseline hazards analysis has been completed by S&H professionals for all facilities, and accident investigation and lessons-learned processes are developed and implemented. Facility personnel trend injury and non-injury S&H data; results are used for continuous improvement action development and results are communicated to employees. Additionally, CP conducts a vigorous and comprehensive Annual Self-Assessment with a companion Annual VPP Report, which in turn generates the CP annual Safety Performance Improvement Initiative.

Hazard Prevention and Control

The Team found that CP satisfies the requirements for hazard prevention and control.

Safety and Health Training

CP continues to satisfy safety and health training requirements. Training addresses all types of managers, workers, and subcontractors.

Conclusion

The Team concludes that the Central Plateau Remediation Project should be put on probation and recertified as DOE Star Site, contingent on correction of the following weaknesses identified by the Team:

1. Inadequate visibility of the VPP Coordinator,
2. Absence of VPP Champions
3. Inadequacy of employee recognition program, and
4. Inadequate VPP outreach and mentoring activities.

I. Introduction

This report summarizes the Department of Energy Voluntary Protection Program (DOE-VPP) recertification evaluation of the Central Plateau Remediation Project (CP). The recertification review was conducted by a team led by the Office of Environment, Safety and Health (EH) from October 25 to 28, 2004. Fluor Hanford, Inc. (FHI) is the CP management and integration contractor. FHI was originally recognized as a Star participant within the DOE-VPP in January 2001. Triennial review is mandated for recertification of VPP Star sites under the DOE-VPP requirements.

Background

The DOE-VPP onsite review of CP was conducted during the week of October 25-28, 2004. FHI has been the management and integration contractor for cleanup activities at CP since July 2002.

Goals for the DOE VPP Recertification

As documented in the DOE-VPP Manuals, a formal onsite review is performed every three years for each Star-recognized site. Since initial certification as a Star site, CP has submitted an annual status report to the DOE-VPP Office. These reports documented CP's annual self-assessments that indicated that the site was meeting the requirements of a Star site. The annual self-assessments indicated that the workers, supervisors, and managers have worked hard to control and mitigate S&H hazards. The self-assessments also showed that the employees were well-trained in hazard recognition and actively utilized those skills to identify actual and potential hazards. CP has consistently reported major adjustments and refinements to their initial VPP baseline that have added significant value to their safety program. The Richland Operations Office (DOE-RL) and EH-VPP staff use the annual reports to verify that CP meets DOE-VPP requirements.

The Team attended the decontamination and decommissioning (D&D) staff meeting at which the managers discussed progress on various projects. The Team also reviewed the records of the past Employee Zero-Accident Council (EZAC) meetings. Managers, safety representatives, and union representatives attend these meetings. Managers presented current site accidents, incidents, and significant safety and health S&H matters in Safety First meetings, followed by robust discussions. The EZAC meeting is one example of the many safety initiatives that have been instituted to improve the communication of S&H issues and concerns at CP and that have improved FHI's safety programs.

Accordingly, the Team's primary goal was to verify continued and enhanced Star-level performance from October 2001 to the present.

Changes Since Designation as DOE-VPP Star Site

Since becoming a Star site on February 21, 2002, the Hanford River Corridor Project has undergone many changes, including a name change to Central Remediation Project. The project included both the River Corridor Project (300 Area) and the Central Plateau (200 Area). Key changes are summarized below:

- On July 1, 2002, Central Plateau (primarily the 200 Area) was separated from the River Corridor (primarily the 300 Area) as part of the transition from Bechtel Hanford to Fluor Hanford as management and integration contractor.

- In August 2002, FHI and DOE-RL requested EH to change the name of the River Corridor Project to Central Plateau Remediation Project.

- In January 2003, EH granted VPP Star status to the Central Plateau Remediation Project following the annual self-assessment in November 2002.

- In July 2004, the Central Plateau Remediation Project and River Corridor Project become part of the D&D organization, with Mike Lackey as Vice-President.

The current Central Plateau Remediation Project D&D organization is very similar in scope to when the original Star status was awarded. The current organization consists of:

- 200 Area Surveillance and Maintenance;
- 300 Area Surveillance and Maintenance, including the FHI facilities that will transition to the new River Corridor Contract;
- D&D Projects;
- Canyon Disposition Initiative (CDI); and
- Waste Site remediation activities.

II. Injury and Illness Rate Information and Trends

The Team reviewed the Occupational Safety and Health Administration (OSHA) 200/300 logs. The rates below include all FHI employees.

FHI INJURY AND ILLNESS DATA					
Calendar Year	Lost Workday Cases	Total Recordable Cases	Employee Hours	Lost Workday Case Incident Rate	Total Recordable Case Incident Rate
2001	1	6	581,332	0.34	2.06
2002	1	6	755,464	0.26	1.59
2003	1	6	601,743	0.33	1.99
3-Year Avg. (2001-2003)	3	18	1,928,539	0.31	1.86
2004	0	2	520,092	0.00	0.77
Bureau of Labor Statistics (BLS) average 2001-2003 (Standard Industrial Classification (SIC) 495)				6.1	3

The information on the OSHA 200/300 logs supports the data provided in self-evaluations – the organization's first report of injury forms and other documents. A health and safety professional is responsible for classifying and recording all injuries and illnesses for OSHA and is responsible for maintaining the OSHA log. Injury and illness data are submitted for inclusion in the DOE Computerized Accident/Incident Reporting System (CAIRS). Routinely, the data output from CAIRS is checked against the actual data reported and submitted to ensure that accurate information is being presented in the CAIRS database. The staff understands the recordkeeping requirements, including the 29 Code of Federal Regulations (CFR) 1904 recordkeeping changes that went into effect in January 2002.

III. Summary of Performance Related to VPP Tenets and Sub-elements

Management Leadership

Interviews conducted by the Team revealed that all levels of CP management continue to demonstrate a Star level of commitment to the safety of their employees. This commitment has not only been demonstrated in policy statements and program and safety promotional activities, but also by addressing employee-identified S&H concerns in a timely manner and by what employees say and believe about their managers. The employees interviewed spoke highly of management and felt they could approach them freely with any S&H issue, and that the appropriate personnel would address their concerns with fairness and honesty.

Management continues to work closely with employees on EZAC, safety walkthroughs, and the monthly organizational D&D Disseminator. The joint participation of workers and managers continues to be an effective tool for the planning and administration of the safety process.

Management continues to participate in S&H activities and maintains an open-door policy that ensures that any employee can express a S&H concern to any level of management. The Team verified that employees felt that most concerns are likely to be solved or addressed with their first-tier managers or with their supervisors. In addition, employees felt the safety committees and first-line supervisors usually handle S&H issues efficiently and effectively. All managers interviewed stated that they frequently went to the field and talked with their employees. Management's daily visits to the worksites continue to serve as a demonstration to employees that management is actively involved in showing FHI employees that their interest is in the safety of workers, not just project completion and meeting the schedule.

Strengths

- The Team found evidence of strong safety culture among managers and workers.
- The Team observed use of lessons learned in pre-job briefings.

Opportunities for Improvement

- The Team was disappointed to find that many of the workers and lower-level supervisors did not know who CP's VPP Coordinator was.
- The Team noted that there were no VPP champions in most sections of the project.
- The Team found that the employee recognition program was marginal at best and needed to be completely revamped; and

- The Team found that VPP outreach and mentoring activities were inadequate.

Accordingly, the Team concluded that these weaknesses were serious enough that CP should be put on probation until these deficiencies are corrected, at which time CP could be recertified as a Star site.

IV. Employee Involvement

Employee interviews clearly indicated that CP employees are actively engaged in their safety and health programs. The employees also stated that management has empowered them to proactively administer the S&H program at their facility, thus meeting the DOE-VPP criteria for Employee Involvement.

Degree and Manner of Involvement

A variety of communication efforts are underway to support employee involvement. Examples of these efforts are listed below:

- Monday morning safety meetings
- Posters
- Safety topics initiate all meetings
- EZAC
- Weekly facility safety walkthroughs
- Monthly organizational publication, the D&D Disseminator

In addition, employees are involved in a variety of safety and health committees, which are discussed later in this report. Employees are involved in the formal and informal reporting of hazards and understand their stop-work authority. They are involved in safety and health investigations of accidents, illnesses, and injuries, and receive appropriate training for this function. Employees participate in the Automatic Job Hazard Analysis (AJHA) computer-interactive work control process that ensures all hazards are identified and that streamlines the planning and execution of work. The Team found that communication benefits significantly from the Hanford Atomic Metal Trades Council (HAMTC) Safety Representative Program that was instituted in 1997.

Safety and Health Committees

CP continues to utilize EZACs on a company-wide basis. A combined team known as the President's Zero-Accident Council includes representatives of all contractor EZAC units. Information flows between the two teams, which were established in 1995. The teams continue to improve in their ability to deal with a variety of safety-related subjects. Team interviews indicate that employees have ample opportunity to serve on one of the teams. Additionally, team members receive additional training in safety-related areas such as inspection techniques and hazard recognition.

Programmatic Weaknesses

The Team's review identified three weaknesses, which are listed below:

- Inadequate and inconsistent application of the FHI-CP Employee Recognition Program;
- Lack of organizational cohesiveness and communication within FHI-CP Projects; and
- Management and employee VPP Champions are not obvious to workers "on the floor."

V. Worksite Analysis

The Team's review and interviews indicated that CP routinely performs worksite analyses. Processes are in place to address worksite analyses for (1) Job Hazard Analysis (HNF-PRO-079, Rev.8), (2) Automated Job Hazards Analysis Process Guide (HNF-GD-17132, Rev.1), (3) Work Planning (HNF-GD-12116), and (4) Safety and Health Inspections (HNF-RD-7652, Rev. 6). These processes establish mechanisms that foster employee involvement in identifying and mitigating hazards in the workplace.

During the onsite review, the Team reviewed a number of work packages for maintenance and D&D activities at CP project and attended several AJHA reviews at the CP 200 Area Surveillance and Maintenance (S&M) and D&D project. The work packages contained evidence of hazard identification and mitigation. Some FHI-CP project personnel expressed frustration about the lack of flexibility of the AJHA process when used for hazard analysis of D&D work activities. The Team feels VPP is most visible in the AJHA process (teamwork). The AJHA documentation at CP clearly incorporated hazard identification and mitigation activities into the S&M and D&D planning and work activity processes.

Routine general hazard control and compliance verifications are being conducted in accordance withHNF-RD-7652, Rev. 6, *Safety and Health Inspections*, and includes inspections performed by CP Occupational Safety and Health personnel, EZAC members, project staff, and management. The self-inspection programs at all CP project areas are active and functional. All CP projects have tailored project and building inspection checklists that score an observation area and rank facility hazards. Responsible managers are assigned to address unsatisfactory areas. Safety inspection trend analyses are used to evaluate information and identified categories for additional attention such as project work sites, building condition, and housekeeping. Employee injury and illnesses are routinely investigated, detailed accident analysis are developed, and suggestions for corrective actions are provided and distributed to all CP personnel in the form of EZACs and pre-job and weekly training topics.

Strengths

Workers are motivated because of their prior involvement in a well-organized and functioning VPP program. They also were enthusiastic about their ownership of, and support to, the processes and activities that foster safety and health. Examples of these programs are the Facility Safety Log Book, worker knowledge of the VPP, and trending. During the onsite review, the Team selected the Facility Safety Log Book program and EZAC facility safety inspection process for additional evaluation.

The Facility Safety Log Book program and EZAC facility safety inspection process are employee-owned behavior-based safety improvement processes at CP. These programs, with their philosophy of actively caring and focusing on behaviors, were initiated in about 2001 in several operating organizations. These programs offer an excellent opportunity to proactively

gather safety-related information. Interviews with workers and management suggest that information is being disseminated around the program to reinforce program objectives and promote participation. Additional benefits will accrue as management and workers identify latent organizational weaknesses and develop effective defenses to mitigate them. Organizational changes require time, and VPP continuous improvement cannot be instituted overnight. Maintaining a strong VPP requires a long-term management and worker commitment.

Opportunities for Improvement

In an interview with a Team member, a CP Safety Engineer stated that he routinely monitors worksite compliance and records observations and deficiencies on a Job Hazard Analysis (JHA) document. From the discussion, the Team concluded that these in-field work monitoring or surveillance activities are being incorrectly recorded as JHAs. CP should train the employees and supervisors on proper designation of activities as JHAs.

VI. Hazard Prevention and Control

The Team found that the level and complexity of hazard prevention and control by Fluor in the CP and D&D project met DOE-VPP criteria. The sub-elements of this tenet were spot-checked and confirmed through employee interviews, witnessing job walkdowns, and participating in an AJHA and by reviewing work packages, Safety Improvement Plans, and safety log books.

This project has a full complement of matrixed S&H professional staff, and the workers have full access to safety professionals. Because the workers and safety staff have a good working relationship, workers are comfortable discussing safety issues with the S&H staff.

CP follows the Fluor ergonomic program. An ergonomic specialist is available to perform evaluations upon request or at any time a workstation changes. The respirator program complies with DOE-VPP criteria. Nuclear chemical operators issue and control the respirators; maintenance is outsourced. The Team identified a best practice where, when feasible, CP uses disposable hoods instead of full-face respirators. The use of disposable hoods is both cost-effective and controls skin contamination.

AJHAs are performed by a team typically consisting of the workers involved, industrial safety and industrial hygiene engineers, radiological control technicians, supervisors and project leads, and other outside resources. The Team noted that tracking hazards with the lessons-learned feature of the AJHA as well as the workers' questioning attitude contributed to a substantial hazard prevention and control process.

CP's preventive maintenance process has an excellent program for determining hazards and implementing controls. The AJHA program performs predictive and preventative hazard analyses for each work package or procedure. The planner inputs this information into each work package. Through feedback and post-job reviews, lessons learned are incorporated into work instructions.

Each area within CP has a safety log book that contains safety issues identified by workers, supervisors, safety walkdowns, and hazard evaluation forms. Log book issues are tracked to resolution. Outstanding items are discussed and ranked. Safety Improvement Plans are implemented and reviewed on a quarterly basis.

CP's medical program uses the Employee Job Task Analysis at the Advanced Medical Facility to provide medical coverage and physicals for their employees. All work areas have a sufficient number of employees trained in first-aid and cardiopulmonary resuscitation (CPR). Each organization within CP also has Automated External Defibrillators (AEDs).

The employees felt that there has been a lack of positive reinforcement for good work practices. CP's continual change in job scopes and management structure has left the workforce feeling confused and disconnected.

VII. Safety and Health Training

The Team found that, in general, CP continues to provide effective and documented training for employees, supervisors, and managers. The training provided is based on meeting certain core and job-specific competencies. Line managers are primarily responsible for identifying required S&H training for employees. CP utilizes an electronic database, the Integrated Training Electronic Matrix, for scheduling and tracking employee training and for generating training reports. The Team verified that CP's safety and health training program continues to be comprehensive and well-administered.

CP's safety and training program continues to emphasize the importance of employees recognizing hazards on the job. This is achieved through various means. First, employees receive formal Hanford general employee training in areas such as safety and health, radiation worker training, hazard communication, hazardous material operation, confined-space entry, fall protection, and hearing conservation. Additionally, job-specific training is also provided for employees whose job requires that they work around certain hazardous materials or in hazardous environments. Examples of specific training areas include asbestos, emergency response, hoisting and rigging, nuclear safety, criticality safety, electrical safety, fall protection, and lockout/tagout.

Additional facility-specific training is provided for specific hazards and skills at various CP facilities. Operating staff personnel receive special qualification training. Employees are also provided training on hazard recognition during weekly safety meetings. Employees are trained in lessons learned through general and mandatory reading of lessons-learned events. On-the-job training helps workers acquire the skills to perform specific jobs safely and effectively. Use of mockup training and the nearby Hazardous Materials Management and Emergency Response (HAMMER) facility for simulated training prepares workers for performing potentially high-hazard activities.

CP managers and supervisors are aware of their safety and health responsibilities for themselves and for their employees. They are required to take specific management-oriented health and safety training (e.g., Leadership Essentials, Safety Leadership, Resolving Employee Concerns, Error Reduction). During the Team's interviews, managers and supervisors were able to explain the training processes and the procedures that have been instituted to ensure each employee receives the necessary training as it related to his or her job function. Managers and supervisors also described the process for handling employees that do not meet the training objectives and requirements of the company.

CP continues to use the IPIX technology (360-degree imaging) that allows personnel to view a particular room or facility remotely. This allows supervisors and workers to conduct planning and training of complex tasks without risking radiological or other occupational exposures. Both workers and supervisors favor the use of this technology.

Workers and supervisors have expressed satisfaction with the CP training program. The Team observed a field supervisor's use of a lessons-learned event in a pre-job safety briefing. Management's goal is to enhance effectiveness of the lessons learned training program. Ttraining curricula are appropriately revised when changes occur to procedures, standards, or regulations, or as a result of lessons learned and other feedback from employees. Employees undergo retraining when such changes occur. A recent example of this is the retraining for the changed and upgraded lockout/tagout procedure.

One area where the Team believes that CP can improve on its training program is in the training of employees who are assigned responsibilities in new technical areas, such as in-ground remediation. Timely and appropriate training of workforce in performing rapidly changing work is crucial to continued success in performing the work safely and effectively.

VIII. Conclusions

The Team concluded that the Central Plateau Remediation Project can be recertified as a DOE-VPP Star site, pending satisfactory resolution of the following weaknesses that it identified:

1. Inadequate visibility of the VPP Coordinator,
2. Absence of VPP Champions,
3. Inadequacy of employee recognition program, and
4. Inadequate VPP outreach and mentoring activities.

The Team concluded that CP should be put on probation until these deficiencies have been corrected. DOE-RL has offered to verify the resolution of these deficiencies. Upon RL's verification of the corrective actions, the site would be recertified as a Star site.

Appendix A: DOE-VPP Recertification Team Assignments

Name/E-Mail	Organization	Area of Responsibility
Steve Singal Steve.singal@eh.doe.gov	DOE, EH-31 Team Leader	Management Leadership
Subir Sen Subir.sen@eh.doe.gov	DOE, EH-31 Assistant Team Leader	Safety and Health Training
Noble Atkins Noble_j_atkins_jr@rl.gov and Elizabeth Norton Elizabeth_a_norton@rl.gov	DOE Richland Field Office CH2MHill/HAMTAC	Employee Involvement
Charlene Johnson Ch1@inel.gov and Gordy Denman Gordon_w_gordy_denman@rl.gov	INEL PTH/FHI	Hazard Prevention and Control
Theo Martin Theo_jr_martin@rl.gov	DOE Richland Field Office	Worksite Analysis